# How to Read a Route Evaluation

**PVTA Comprehensive Service Analysis**

# Route Evaluation

The Comprehensive Service Analysis (CSA) involves evaluating each of PVTA's routes.  The evaluation process involves:

- Describing the route's schedule and routing
- Examining how riders use the route – where they get on and off and when they travel
- Looking at ridership by time of day
- Identifying where the route works well and where it needs strengthening
- Developing options to improve the routes

# Each route evaluation presents:

- General service area, including route map of primary origins and destinations
- The alignment and service patterns, including the route's usual path, as well as any variations (variants)
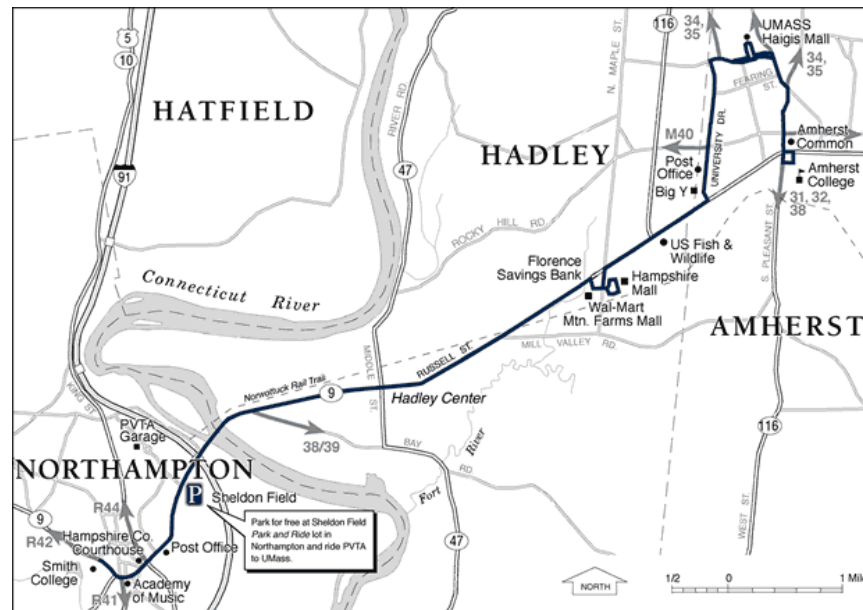
# Each route evaluation presents:

- Service characteristics, including days of the week, starting time and ending time, the time between trips (frequency of service), and the number of trips

**FIGURE 2 – SCHEDULE OVERVIEW**

| SERVICE DAY* | SPAN OF SERVICE | TYPICAL FREQUENCY (PEAK / OFF-PEAK) | DAILY TRIPS SOUTHBOUND / NORTHBOUND |
|---|---|---|---|
| Monday – Wednesday | 6:00 AM – 12:15 AM | 20 / 20 | 43 / 43 |
| Thursday – Friday | 6:00 AM – 2:20 AM | 20 / 20 | 46 / 46 |
| Saturday | 6:45 AM – 2:20 AM | 30 | 30 / 30 |
| Sunday | 8:00 AM – 11:10 PM | 60 | 16 / 16 |

\* Schedule information reflects service during the academic calendar. Source: PVTA route schedules.

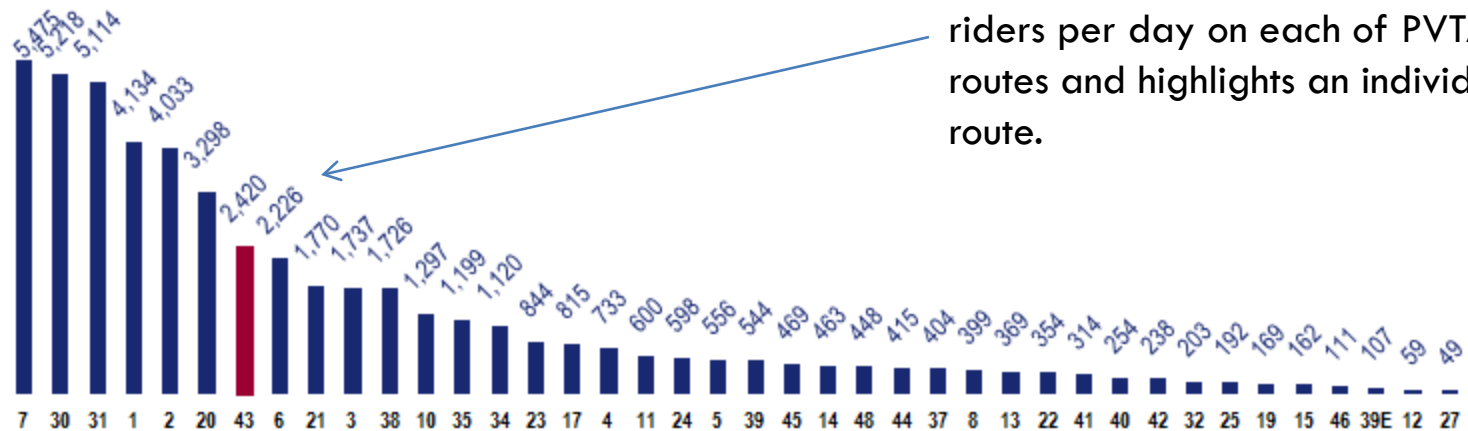Time when the bus service begins and ends

Time between trips (also referred to as service frequency

Number of trips in each direction
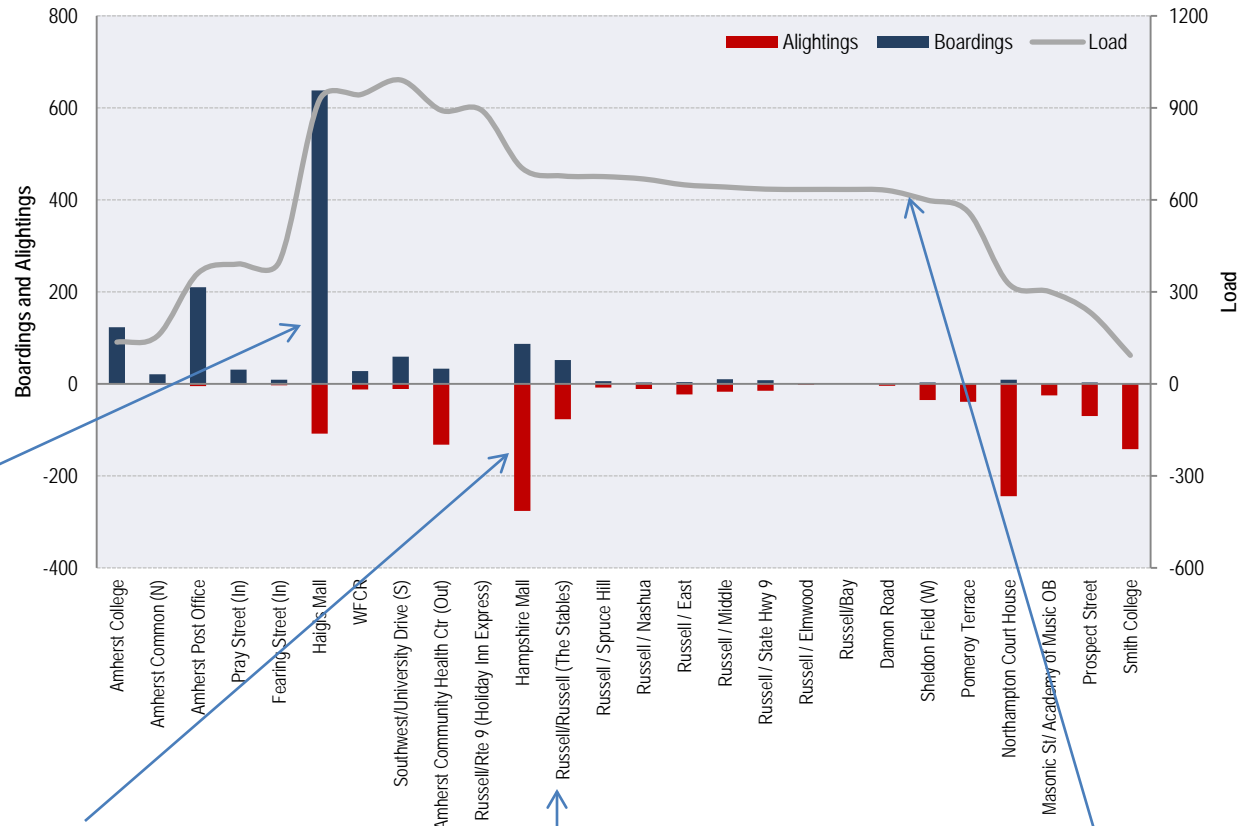
# Each route evaluation presents:

- Comparison of route productivity, including the number of people who ride the bus on an average day.



FIGURE 4 – AVERAGE WEEKDAY RIDERSHIP

This graph shows the number of riders per day on each of PVTA's routes and highlights an individual route.
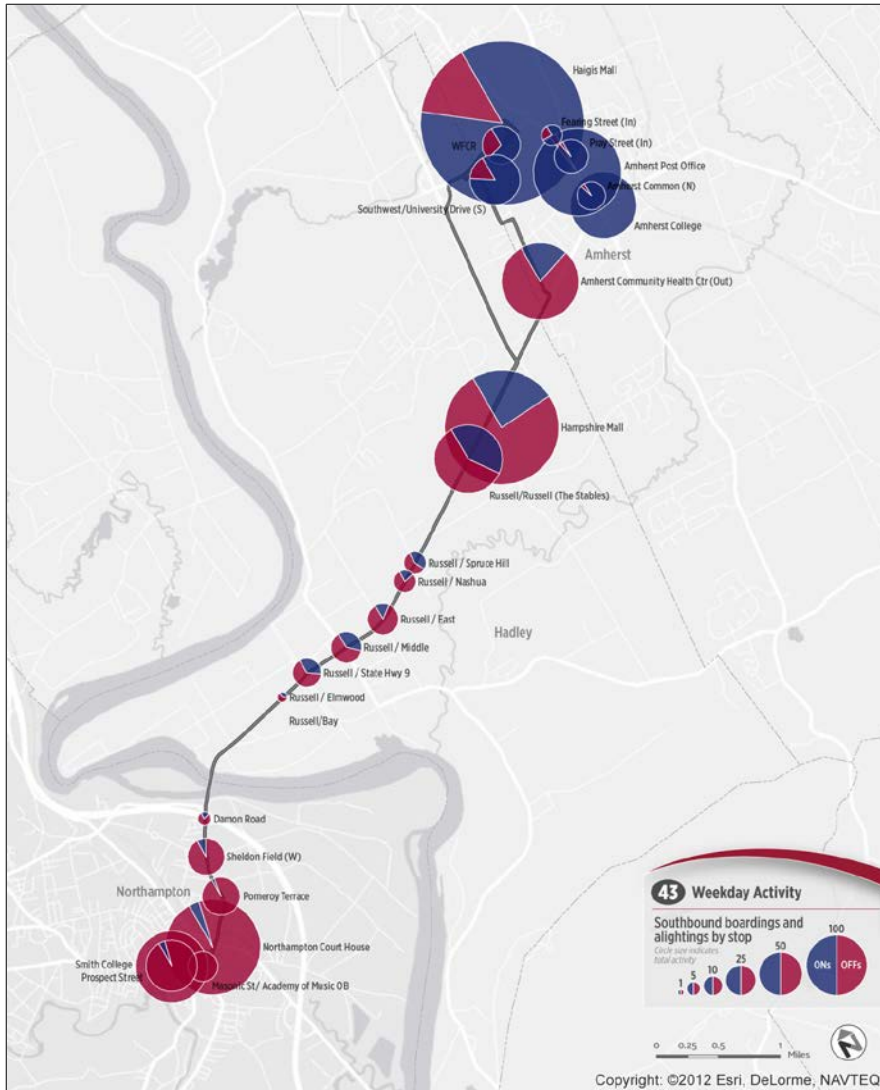
# Each route evaluation presents:



The blue bar shows where people get on the bus

Red bars show where passengers are getting off

Name of each bus stop on the route

The load line goes up when people get on and goes down get off. This data shows us where the bus gets full and how long it stays full

# Each route evaluation presents:



Map where passengers get on (blue) and off (red) the route. It is for inbound travel only.

This information helps us understand how passengers use the route and where the most important stops are located.

# Each route evaluation presents:

This graph shows how people use the bus route by showing when they ride and which trips they use. It also shows if trips have too many or not enough riders; this may mean more service is needed, or too much is available.

**FIGURE 10 – SATURDAY NORTHBOUND RIDERSHIP PER TRIP**
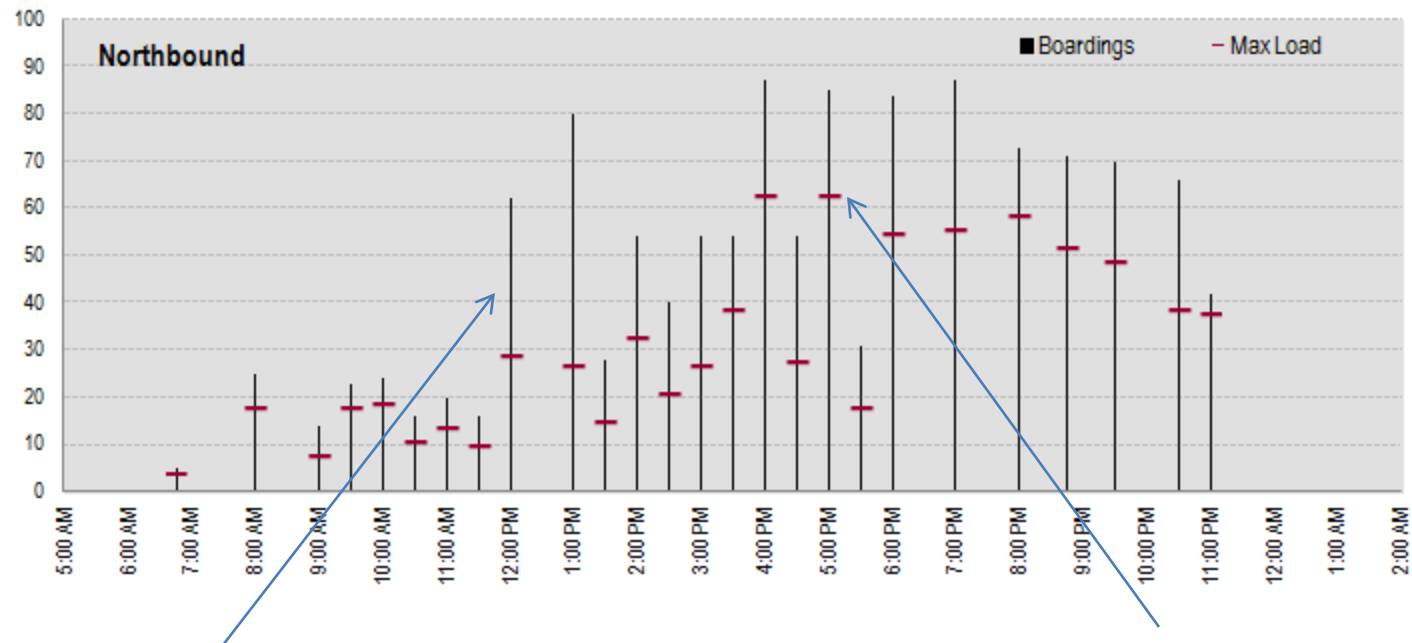


The black bar shows how many riders get on the bus for each trip (total boardings by trip).

As the bus travels on its route, riders get on and off the bus. The red line shows the largest number of people on the bus at one time. It helps us understand how crowded the bus gets on each trip. Regular sized buses have seats for about 40 passengers. In this particular case, the red line shows that there are more than 60 riders on this trip, so some are standing.

# Each route evaluation presents:

- Financial and productivity statistics. This data helps us understand how one route compares to the whole system. It includes information for weekdays, Saturdays and Sundays.

**FIGURE 13 | PERFORMANCE MEASURES**

| PERFORMANCE MEASURE | WEEKDAY | | SATURDAY | | SUNDAY | |
| --- | --- | --- | --- | --- | --- | --- |
| | ROUTE 43 | SYSTEM AVG | ROUTE 43 | SYSTEM AVG | ROUTE 43 | SYSTEM AVG |
| Operating Cost per Passenger | $1.64 | $2.05 | $1.22 | $3.54 | $1.05 | $4.55 |
| Passengers per Revenue Vehicle Hour | 26.5 | 32.9 | 50.1 | 31.5 | 57.1 | 28.9 |
| Passengers per Revenue Vehicle Mile | 3.3 | 2.6 | 4.1 | 2.4 | 5.1 | 2.3 |

Source: PVTA performance data.

How much money PVTA spends to carry each passenger.

Number of passengers carried per hour of service. A bus is in revenue service when it is available to the public to carry passengers.

Number of passengers per miles that a bus travels while in revenue service.

Data shows the average for all PVTA routes.

# Each route evaluation presents:

- **Service improvement options**
  - These are options, not recommendations.
  - PVTA staff will review each option and consider if they have additional ideas for how the route might work better.
  - Improvement options will be discussed and determined if should be carried forward for more analysis.
  - Members of the public are encouraged to review the service improvement options. If you have any additional ideas, please let us know.  If you don't like something, or really like an ideas, we would like to know this as well.
  - Thanks for your help!